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| 10/719,673 | 11/21/2003 | Khosro Khakzadi | 03-1862/L13.12-0251 | 1314 |
| 7590 | 07/27/2007 | | EXAMINER | |
| Leo Peters LSI Logic Corporation MS D-106 1621 Barber Lane Milpitas, CA 95035 | | | WIENER, ERIC A | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|-----------------|-----------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/719,673 | KHAKZADI ET AL. |
| | Examiner | Art Unit |
| | Eric A. Wiener | 2179 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 11 May 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-16 and 19-24 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-16 and 19-24 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 21 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

1. This action is responsive to the following communications: Amendment filed on 5/11/2007.

This action is made final.

2. Claims 1 – 16 and 19 – 24 are pending in the case. Claims 17 and 18 have been cancelled.

Objections

3. The amended claims contain the following punctuation errors:
 - Claim 7: “commands command.” should be “commands.”
 - Claim 8: “cconfiguration” should be “configuration”
 - Claim 23: “commands assigned” should be “commands are assigned”

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1 – 7 and 24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Independent claim 1 is nonstatutory, because the language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological

environment or machine that would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. In claim 1, a command processor *on* a computer system is claimed. The claimed command processor, regardless of what it resides on, is just an article of software, which in and of itself is nonstatutory. Therefore, because the claim is directed to a command processor itself and not a tangible hardware medium including a command processor, the claim is rejected under 35 U.S.C. 101. The claim must include a statutory medium in order to form the basis of statutory subject matter under 35 U.S.C. 101.

Claims 2 – 7 depend on claim 1, and are rejected under 35 U.S.C. 101 for the same reason as claim 1.

Independent claim 24 is nonstatutory, because the language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological environment or machine that would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. An integrated circuit software design suite is claimed, which is basically software. Software in and of itself is nonstatutory. The software design suite requires the addition of a tangible hardware element in order to produce a tangible result.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 – 4, 7 – 13, and 19 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nahaboo et al. (US 5,974,253).

As per claim 1, Nahaboo discloses *a command processor on a computer system* (column 6, lines 16 – 18) *comprising a graphical user interface for providing a graphical interface to the computer system* (Fig. 2) *and a command interpreter* (column 6, line 50), which:

loads one or more configuration commands into the command processor from at least one of:

- *a user specified command configuration script comprising the one or more configuration commands* (column 6, lines 50 – 59 and column 13, lines 32 – 35), wherein command configuration scripts are part of interface description files, which are user specified because a user may specify an interface description file to load, *or from*

- *a command line in which the one or more configuration commands are entered by the user* (column 9, lines 53 – 60, column 10, lines 36 – 44, and Fig. 4B), wherein the command line area to enter configuration commands is area 315 of Fig. 4B, *and*

interprets the configuration commands and modifies the graphical user interface according to the interpreted configuration commands (column 6, lines 50 – 64), wherein the fact that the interpreter interprets **all** events that arise and that the system reacts in a purely **dynamic** manner means that the interpreter

will interpret both saved user specified configuration scripts and configuration commands entered by a user from a command line in order to dynamically modify the interface.

As per claim 2, and taking into account the rejection of claim 1, Nahaboo further discloses that *the graphical user interface is modifiable by the user at run time of the graphical user interface through the configuration commands loaded by the command interpreter* (column 6, lines 56 – 58).

As per claim 3, and taking into account the rejection of claim 1, Nahaboo further discloses that *the command interpreter interprets the user configuration commands to produce graphical objects within the graphical user interface* (column 7, line 55 – column 8, line 10).

As per claim 4, and taking into account the rejection of claim 3, Nahaboo further discloses that *the command interpreter interprets the user configuration commands to assign functionality to the graphical objects* (column 9, lines 39 – 42).

As per claim 7, and taking into account the rejection of claim 1, Nahaboo further discloses *a graphics engine tool for drawing contents of a database into the graphical user interface based on the user configuration commands* (column 3, lines 52 – 61).

As per claim 8, Nahaboo discloses *a method of providing a fully customizable graphical user interface* (column 6, lines 11 – 23) comprising:

- *upon execution of a command processor, loading a top level Tool Command Language (TCL) command into a namespace* (column 3, lines 52 – 54 and column 6, lines 50 – 56)

- *loading one or more TCL commands into the command processor from at least one of:*
 - o *a user specified TCL command configuration script comprising the one or more TCL configuration commands (column 6, lines 50 – 59 and column 13, lines 32 – 35), wherein command configuration scripts are part of interface description files, which are user specified because a user may specify an interface description file to load, or from*
 - o *a command line in which the one or more TCL configuration commands are entered by the user (column 9, lines 53 – 60, column 10, lines 36 – 44, and Fig. 4B), wherein the command line area to enter configuration commands is area 315 of Fig. 4B, and*
- *building graphical objects (column 7, line 55 – column 8, line 10) according to the TCL configuration commands (column 6, lines 53 – 56)*
- *assigning functionality to the built graphical objects (column 9, lines 39 – 42) according to the TCL configuration commands (column 6, lines 53 – 56)*
- *displaying a user-interactive window containing the graphical objects according to the TCL configuration commands (column 3, lines 34 – 36).*

The examiner has interpreted the fact that Nahaboo discloses using an interpreted language (Abstract, lines 1 – 2) sufficiently discloses the use of the interpreted language Tool Command Language.

As per claim 9, and taking into account the rejection of claim 8, Nahaboo further discloses *performing functions based on user interactions with the graphical objects according to their assigned functionality* (column 10, lines 45 – 54).

As per claim 10, and taking into account the rejection of claim 8, Nahaboo further discloses that *the graphical objects are selected from a group consisting of windows, window panes* (column 4, lines 39 – 41), *buttons, and menus* (column 6, lines 4 – 5).

As per claim 11, Nahaboo substantially discloses the method of claim 8. In addition, Nahaboo further discloses *creating the TCL command configuration script and assigning the TCL command configuration script to one of the graphical objects* (column 11, lines 55 – 58). Nahaboo does not explicitly disclose the TCL script corresponds to a circuit design function. However, Nahaboo does disclose that “the purpose of this invention is to define an extremely flexible interface development tool that can be used regardless of the application” (column 1, lines 29 – 31). Therefore, Nahaboo’s script could correspond to a circuit design function if the user defines it in such a way.

As per claim 12, and taking into account the rejection of claim 11, Nahaboo further discloses that *one of the graphical objects is a button* (column 6, line 4).

As per claim 13, and taking into account the rejection of claim 11, Nahaboo further discloses that *one of the graphical objects is an item within a pull-down menu* (column 6, line 5).

As per claim 19, Nahaboo discloses *a method of providing a graphical user interface, comprising*:

- *loading a top level Tool Command Language (TCL) command into a namespace upon execution of a command processor* (column 3, lines 52 – 54 and column 6, lines 50 – 56)
- *providing a command interpreter for interpreting one or more configuration commands from a user* (column 6, lines 50 – 52)
- *loading the one or more configuration commands into the command processor from at least one of:*
 - o *a user specified command configuration script comprising the one or more configuration commands* (column 6, lines 50 – 59 and column 13, lines 32 – 35), wherein command configuration scripts are part of interface description files, which are user specified because a user may specify an interface description file to load, *or from*
 - o *a command line in which the one or more configuration commands are entered by the user* (column 9, lines 53 – 60, column 10, lines 36 – 44, and Fig. 4B), wherein the command line area to enter configuration commands is area 315 of Fig. 4B, *and*
- *assembling a graphical user interface having no hard coded objects based on the interpreted configuration commands from the user* (column 6, lines 53 – 59)
- *wherein all objects within the graphical user interface are user defined through the one or more configuration commands* (column 6, lines 53 – 59), and wherein the fact that the user can enter the ‘editing’ mode without entering the ‘execution’ mode means that said user can define all objects of the graphical user interface before

execution, thus defining all objects of a graphical user interface having no hard coded objects.

The examiner has interpreted the fact that Nahaboo discloses using an interpreted language (Abstract, lines 1 – 2) sufficiently discloses the use of the interpreted language Tool Command Language.

As per claim 20, and taking into account the rejection of claim 19, Nahaboo further discloses *changing the graphical user interface based on changing configuration commands from the user* (column 6, lines 62 – 63) *and displaying a changed graphical user interface during operation based on the changing configuration commands* (column 6, lines 56 – 59).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 5 – 6, 14 – 16, and 21 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nahaboo et al. (US 5,974,253) and Dangelo et al. (US 5,493,508).

As per claim 5, Nahaboo substantially discloses the command processor of claim 1. However, Nahaboo does not explicitly disclose a suite of integrated circuit tools, each design tool of the suite having a functionality corresponding to one or more steps in a design flow process of an integrated circuit.

On the other hand, in an analogous art, Dangelo discloses *a suite of integrated circuit tools, each design tool of the suite having a functionality corresponding to one or more steps in a design flow process of an integrated circuit* (column 1, lines 7 – 9, 38 – 41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Dangelo into the command processor of Nahaboo to develop a command processor comprising a suite of integrated circuit design tools with a modifiable graphical user interface. The modification would have been obvious, because the nature of utilizing a graphical user interface in a circuit design process would allow for the specification and modification of the graphical user interface to produce a design (Dangelo, column 2, lines 62 – 65).

As per claim 6, Nahaboo and Dangelo substantially disclose the command processor of claim 5. In addition, Nahaboo further discloses that *the command processor loads each design tool into the graphical user interface based on the user configuration commands* (column 6, lines 50 – 52).

As per claim 14, Nahaboo substantially discloses the method of claim 8. However, Nahaboo does not explicitly disclose changing a look and feel of the graphical user interface during a design process.

On the other hand, in an analogous art, Dangelo discloses *changing a look and feel of the graphical user interface during a circuit design process* (column 2, lines 62 – 65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Dangelo into the method of Nahaboo to develop a method of providing a fully customizable graphical user interface for customizing during a circuit design process. The modification would have been obvious, because the nature of utilizing a graphical user interface in a circuit design process would allow for the modification of the graphical user interface to produce a design (Dangelo, column 2, lines 62 – 65).

As per claim 15, Nahaboo and Dangelo substantially disclose the method of claim 14. In addition, Nahaboo further discloses *creating new graphical objects, previously undefined by the command processor* (column 7, line 55 – column 8, line 10) *using the TCL configuration commands* (column 6, lines 53 – 56) *and assigning functionality to the new graphical objects* (column 9, lines 39 – 42).

As per claim 16, Nahaboo and Dangelo substantially disclose the method of claim 14. In addition, Nahaboo further discloses:

- *loading a new top level TCL command into the namespace which corresponds to one or more new TCL configuration commands* (column 3, lines 52 – 54, column 6, lines 50 – 56, and column 9, lines 53 – 60)

- *building graphical objects (column 7, line 55 – column 8, line 10 and column 10, lines 36 – 44) according to new TCL configuration commands (column 6, lines 53 – 56)*
- *assigning functionality to the built graphical objects (column 9, lines 39 – 42 and column 10, lines 36 – 44) according to the new TCL configuration commands (column 6, lines 53 – 56)*
- *displaying the user-interactive window containing the graphical objects according to the new TCL configuration commands (column 3, lines 34 – 36)*

The examiner has interpreted the fact that the interface can load the file of commands to reconstruct the interface in a purely dynamic manner to be sufficiently equivalent to being able to change a look and feel according to new commands and objects.

As per claim 21, Nahaboo substantially discloses the method of claim 19. Nahaboo does not explicitly disclose interfacing with a suite of integrated circuit design tools for producing an integrated circuit layout and associated netlist.

However, in an analogous art, Dangelo discloses *interfacing with a suite of integrated circuit design tools for producing an integrated circuit layout and associated netlist* (column 2, line 55 – column 3, line 13).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Dangelo into the method of Nahaboo to develop a method of providing a graphical user interface having no hard coded objects for interfacing with a suite of integrated circuit design tools. The modification would have been obvious, because the nature of utilizing a graphical user interface in a circuit design process would allow for the

specification and modification of the graphical user interface to produce a design (Dangelo, column 2, lines 62 – 65). If the user has control over defining some aspects of an interface, it would be obvious that the user would have the ability to completely define all aspects of an interface for circuit design.

As per claim 22, Nahaboo and Dangelo substantially disclose the method of claim 21. In addition, Nahaboo further discloses *loading a design tool from the suite of design tools into the graphical user interface based on a user command* (column 8, lines 7 – 51).

As per claim 23, Nahaboo and Dangelo substantially disclose the method of claim 22. In addition, Nahaboo further discloses that *the one or more user configuration commands are assigned to one or more graphical objects* (column 9, lines 39 – 42).

As per claim 24, Dangelo discloses *an integrated circuit software design suite* (column 5, lines 21 – 26) *comprising*:

- *a command processor having a graphical user interface* (column 8, lines 47 – 67) *and a command interpreter* (column 5, lines 25 – 28) *for interpreting user commands* wherein the fact that the system processes user selections for graphically interfacing with elements is equivalent to having a processor for processing and interpreting commands
- *one or more design tools corresponding to processes within an integrated circuit design process* (column 8, lines 47 – 50)
- *wherein the one or more design tools operate under control of the command processor and within the graphical user interface* (column 8, lines 47 – 67)

Dangelo does not explicitly disclose that the graphical user interface is specified entirely by a user at runtime.

However, in an analogous art, Nahaboo discloses *a graphical user interface specified entirely by a user through one or more configuration commands loaded into the command processor at run time of the command processor and interpreted by the command interpreter* (column 6, lines 56 – 64).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate the teaching of Dangelo into the software design suite of Nahaboo to develop an integrated circuit software design suite comprising a graphical user interface specified entirely by a user at run time. The modification would have been obvious, because the nature of utilizing a graphical user interface in a circuit design process would allow for the specification and modification of the graphical user interface at runtime (Dangelo, column 2, lines 62 – 65). If the user were able to specify parts of the interface at runtime, it would be obvious that said user would have the ability to specify the entire interface at runtime.

11. It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

12. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure. The cited documents represent the general state of the art.

Response to Arguments

13. Applicant's arguments filed on 5/11/2007 have been fully considered but they are not persuasive.

14. In response to applicant's arguments that Nahaboo et al. do not anticipate features of claims 1, 8, and 19, please see the rejections of claims 1, 8, and 19 *supra*.

15. Applicant has argued that *Nahaboo et al. do not teach, suggest, or make obvious a command processor, where the graphical user interface is specified entirely by a user through one or more configuration commands loaded into the command processor at run time of the command processor and interpreted by a command interpreter, and that these elements would not be obvious to one of ordinary skill in the art.*

In response to this argument, please see the rejections of claims 1 and 24 *supra*.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric A. Wiener whose telephone number is 571-270-1401. The examiner can normally be reached on Monday through Thursday from 9am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo, can be reached on 571-272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Eric Wiener
Patent Examiner
A.U. 2179


WEILUN LO
SUPERVISORY PATENT EXAMINER